

REMARKS

In the Office Action, the examiner rejected claims 1-2, 4 and 8 as anticipated by U.S. Application 2003/0062031 (Tanimura). The examiner further rejected claim 9 [sic 8] as obvious in view of Tanimura. Also, claims 3 and 5-7 were objected to and not further treated on the merits because they were dependent claims in improper form.

Upon review of Tanimura and Applicant's present disclosure, it is respectfully submitted that the examiner has not properly described or applied the apparatus set forth in Tanimura as a prior art reference. Therefore, it is submitted that the rejection on Tanimura is unfounded and should be withdrawn.

Tanimura discloses a fuel supply system with transfer pumps which are to be located in a vehicular fuel tank. The fuel tank is disclosed as being of the kind that has first and second fuel sump portions, such as occur in a fuel tank having a raised center portion to straddle a drive shaft. The fuel pump is to be located in the first sump portion and then to ensure that fuel from the second sump portion is delivered to the first sump portion, a first transfer pump is provided. The first transfer pump is driven by a divergent stream of fuel from the fuel pump as the fuel pump supplies fuel to the vehicle's engine. A second transfer pump also is driven by the divergent stream of fuel and is arranged to feed fuel from the broader first fuel sump area into a turning reservoir (baffle) that surrounds the fuel pump. This is a common arrangement to ensure that sufficient fuel is in the area of the fuel pump even when the vehicle is encountering high cornering forces that would otherwise drive the fuel away from the fuel pump.

The basis of the invention in Tanimura is that a divergent fuel flow control valve (venturi 20) is placed in the fuel supply line to the engine to develop and control

the divergent fuel flow in a manner that decreases the flow rate of the divergent fuel as the flow rate delivered by the fuel pump to the vehicle's engine increases. This is said to be beneficial because the overall flow capacity of the fuel pump then can be less than if the divergent flow was permitted to unnecessarily increase as the fuel flow to the engine increased. Tanimura claims that this better control of the divergent fuel flow makes for a more appropriate, lower flow rate relative to the increased fuel flow to the engine. Tanimura, paragraphs 0001-0013, 0024-0042, and 0057-0058.

The fuel tank 11 of Tanimura has the aforementioned two sump portions 11a and 11b. Paragraph 0024. Contrary to the examiner's assertion, the first sump portion 11a of the overall tank is not a baffle. It is believed that one of ordinary skill in the art would readily understand that a baffle is a device that serves as a partition or divider to assist in controlling flow, and that portion 11a in Tanimura is, as it is described, a portion of a fuel tank and not a baffle. Not to be mistaken, there is a baffle in Tanimura, but it is established by the "turning reservoir" 15. Paragraphs 0026-0030. Moreover, the area 11d of first sump portion 11a, which is located outside of the turning reservoir 15 cannot therefore be a first chamber of the baffle because it is outside of the baffle 15.

Also, Tanimura does not disclose a throttle valve between first and second chambers of a baffle. Tanimura only discloses one chamber within its baffle 15. In addition, the flow between the area 11d outside of the baffle 15 and the interior of baffle 15 of Tanimura is controlled by the second suction jet pump 18. It is respectfully submitted that suction jet pump 18 is not a valve, but rather is a pump which forces a fuel flow into baffle 15 as a greater volume of fuel flows from the fuel pump 12 through the primary fuel passage 13 and its venturi 20 that regulates the fuel flow through the suction jet pumps 17 and 18. Thus, if no fuel is flowing through the

fuel pump 12, then no divergent fuel is available to operate either of the suction jet pumps 17 and 18, and no fuel is transferred to the baffle 15 from the second sump portion 11b or from the area 11d of the first sump portion 11a. Under such a condition of running out of fuel, the Tanimura fuel system would suffer the same fuel starvation state that is common in the prior art, and that is overcome by Applicant's present fuel feed unit. Indeed, Tanimura merely addresses controlling the divergent fuel flow so as to better size the fuel pump for the system.

In essence, Applicant's disclosure and claims provide a feed unit that has a baffle that includes first and second chambers, and a throttle valve between the two chambers so that fuel can flow from the outer second chamber into the inner first chamber on a continuous basis, even after the vehicle appears to have run out of fuel and caused the engine to stall. The feed rate through the throttle valve, which is not a pump, i.e., is not driven and does not force fuel through itself, but rather is an opening that is designed to allow fuel to flow continuously from the second chamber to the first (until an equivalent fuel level is reached in the first and second chambers), but at a rate of flow that would not be great enough to feed the fuel pump sufficiently to keep the engine running as the fuel is drawn out of the first chamber. Thus, with Applicant's device, the vehicle engine would stop, due to fuel starvation, and then fuel within the second chamber would slowly flow through the throttle valve until the fuel levels in the first and second chambers equalized. This would ensure that enough fuel would be present at the fuel pump intake in the event that the vehicle operator obtains a gas can and inserts a relatively small amount of fuel in the tank before attempting to restart the engine. In the absence of Applicant's device, some fuel tanks are not able to be designed to direct the relatively small amount of fuel that is

provided by the gas can to the location of the inlet of the fuel tank, and therefore, the intake may not be submerged when attempting to restart the engine.

Tanimura does not address in any manner the novelty or non-obviousness of Applicant's claimed subject matter. Moreover, the claimed subject matter is distinguished over Tanimura structurally, as well as functionally, as noted in the above remarks. Accordingly, Applicant believes that the claims, as amended, overcome the objections presented by the examiner, and that claims 1-9 now are in condition for allowance, and respectfully requests the same.

Applicant believes that no further fee is due with this response, however, the Commissioner is authorized to charge any fee deficiency due for the filing of this paper to deposit account number 50-2455.

Respectfully submitted,

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